

# NARO

## Kyushu Okinawa Agricultural Research Center (NARO/KARC)



*Creating the Future with Research and Development*



National Agriculture and Food Research Organization (NARO)

## History and Overview

The NARO Kyushu Okinawa Agricultural Research Center (NARO/KARC) is an institute focused on basic and applied research. We are also involved with the dissemination of any technologies that we develop.

We aim to contribute to the development of agricultural technologies, promote related industries and create new food cultures for the Kyushu-Okinawa region.

The NARO/KARC originated from the Kyushu Wheat Research Station, which was established in 1932 by the Ministry of Agriculture and Forestry (MAF) Agricultural Experiment Station. In April 1950 the Kyushu Wheat Research Station changed its name to the Kyushu National Agricultural Experiment Station of the MAF and in 2001, as part of Japan's administrative reforms, became a research institute of the National Agriculture Research Organization (currently, the National Agricultural Research Organization Food Research Institute [NARO]).

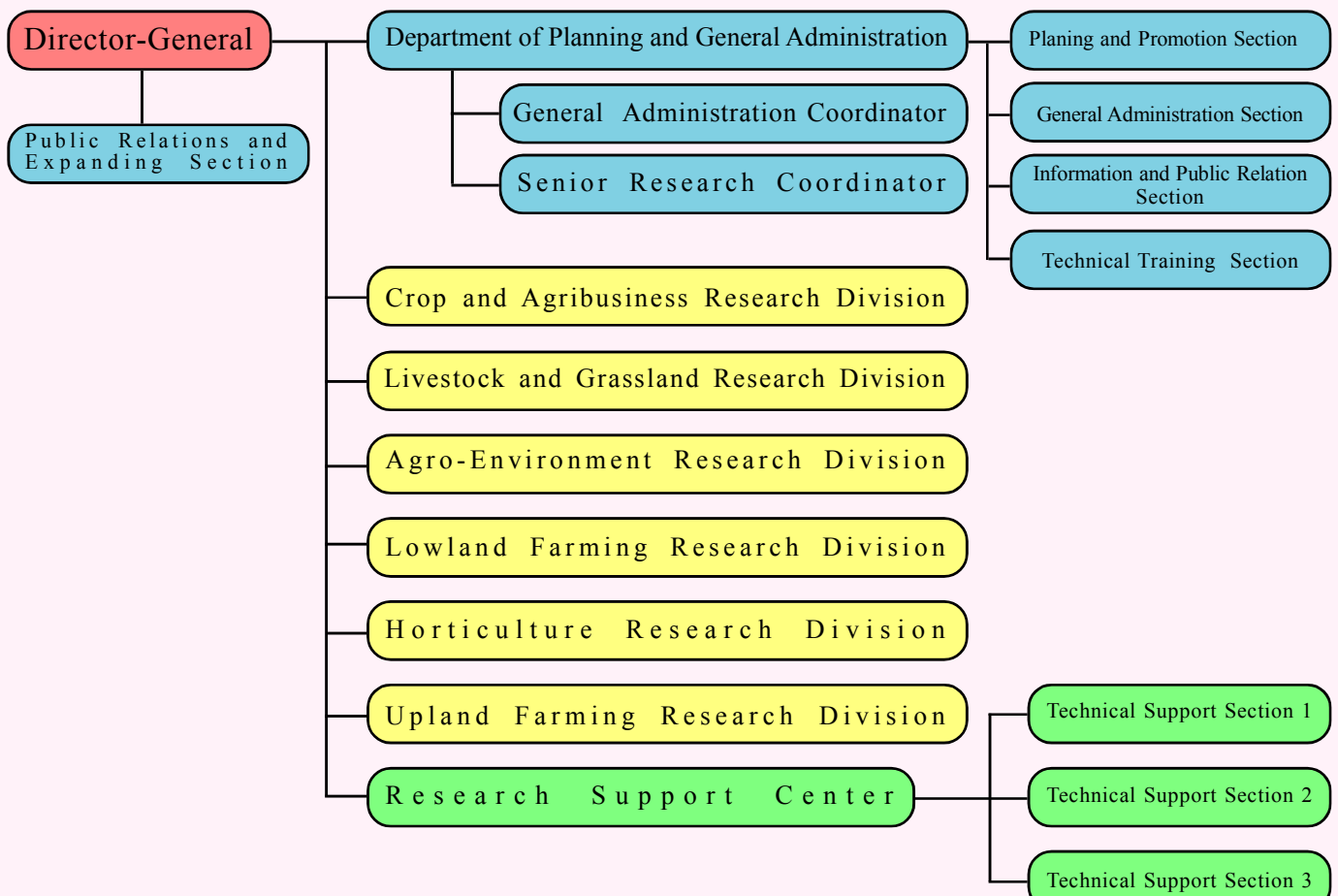
Research activities at the NARO/KARC contribute to the development of stable food resources, improvement of food safety and consumer confidence, development of global warming measures and promotion of biomass use, creation of new demands, and other goals set forth in the mid-term plan developed by the NARO. We are a core institute for local agricultural research through the establishment of the following five research areas: crop development and utilization, livestock and grassland, production environment, rice cultivation and horticulture, and upland farming.

The Kyushu-Okinawa region has high agricultural diversity and is an important area for food production in Japan. In addition to typhoons and droughts, the region has experienced damage from high temperatures and new exotic pests associated with global warming. Since the food industry has played an important role in this region, it is important for us to develop a "senary" industry (a term coined by Naraomi Imamura for a new industrial category that integrates primary, secondary and tertiary industries) and to foster business collaborations among agriculture, commerce and industry. The NARO/KARC will continue to conduct research designed to address these issues in an appropriate and prompt manner while closely collaborating with the government under the new research system. We will also promote collaborations among industry, university, government and public relations activities.



Dr. Masahiro Okamoto  
Director General of NARO/KARC

## Organization of NARO/KARC



## Crop and Agribusiness Research Division

Koshi(Headquaters), Tanegashima, Itoman



Field crops of soybean, sugarcane, buckwheat and Job's tears are being genetically improved in the breeding programs for the Kyushu-Okinawa region. New varieties such as spring buckwheat "Harunoibuki", Job's tears "Akishizuku" and a high sucrose sugarcane "Ni27" are being expanded in the region. Farm management for local development and food functionality for people's health are also major concerns in this division. A consortium of agricultural producers and associates was organized for new agribusiness opportunities and resulted in the successful commercialization of some new products using black-colored soybean "Kurodamaru". A database for health-functionality in agricultural products will be developed in the next five years, using a standardized analytical method.

## Livestock and Grassland Research Division

Koshi(Headquaters)



We will develop technologies related to livestock and feed production in warm regions. So far, we have developed preparation and feeding techniques for fermented Total Mixed Ration (TMR) feed that uses forage rice and shochu distillery by-product concentrate; calf production techniques that use year-round grazing; and technologies for producing nitrogen-enriched compost while eliminating odor emission during composting, etc. In the future, we will work on the breeding of forage crops and biomass-resource crops; the production, preparation and utilization of self-supplied feed through the enhancement of land productivity; fattening of beef cattle by grazing them on abandoned paddy or other crop fields; control of the productivity decline of livestock in warm environments; and the advanced use of biomass in warm regions.

## Agro-Environment Research Division

Koshi(Headquaters), Itoman



We will develop technologies related to diseases, insect and nematode damage on crops, environmental resources (soil and water management) and agricultural meteorology. So far, we have developed technologies for reducing the risk of fungal toxin (mycotoxin) contamination of crops; conducted research on exotic pests coming from overseas such as rice insects; and developed technologies for using compost pellets, etc. In the future, we will work on improving the technologies for reducing fungal toxin risks; prediction and control technologies for warm-climate exotic and new pests; soil-management technologies through fertility evaluation as deep as the subsoil; and the use of water and organic resources, etc.

## Lowland Farming Research Division

Chikugo and Kurume Research Station (Chikugo area)



Research is directed towards developing laborsaving, costless, and global-warming-adapted technologies using direct seeding systems for rice to establish double-cropping and rotational paddy-field technologies for rice, soybean, wheat, barley, and other crops grown in warm regions. Recently, we have developed a heat-tolerant paddy rice variety, "Nikomaru", a high-yielding paddy rice variety, "Mizuhochikara" for rice flour and feed, a bread wheat variety, "Minaminokaori" and a proanthocyanidin-free barley variety, "Shiratae-nijo" for food, etc. One of our short-term objectives is to contribute to the development of advanced crop-rotation techniques by improving rice seedling establishment with the application of a new direct-seeding technique using molybdenum.

## Horticulture Research Division

Chikugo and Kurume Research Station (Kurume area)



We will develop technologies for stabilizing vegetable production in warm regions, with a focus on strawberries. So far, we have bred strawberry varieties such as Oi-C-berry (a variety that is delicious and rich in vitamin C) and developed a "crown temperature control technology" that increases yields and cuts costs associated with strawberry cultivation. In the future, we will also conduct research on solar-powered and artificial-light-powered "plant factories."

## Upland Farming Research Division

Miyakonojo Research Station



We will develop technologies to revitalize upland farming in warm regions. To date, we have bred new sweet potato varieties such as "Konamizuki" (a variety with special starch gelatinizing properties at low-temperature) and "Beniharuka" (a variety that is especially delicious), and a new high-yielding corn variety "Natsumusume" for summer sowing. We also developed technologies using nematode-suppressive crops in crop rotation systems, and technologies for extracting and utilizing functional components of sweet potatoes, etc.

In addition to breeding new crop varieties, in the future we will develop laborsaving cultivation technologies for upland crops and vegetables that can be applied to large-scale farming, and develop model crop rotation systems for collaboration between livestock and cultivating farms to promote regional sustainable agriculture.

# Addresses of NARO/KARC

## Chikugo and Kurume Research Station

Kurume \_\_\_\_\_  
 Mii-machi 1823-1, Kurume, Fukuoka 839-8503

Chikugo \_\_\_\_\_  
 Izumi 496, Chikugo, Fukuoka 833-0041

## Koshi(Headquaters)

Suya 2421, Koshi, Kumamoto 861-1192

## Miyakonojo Research Station

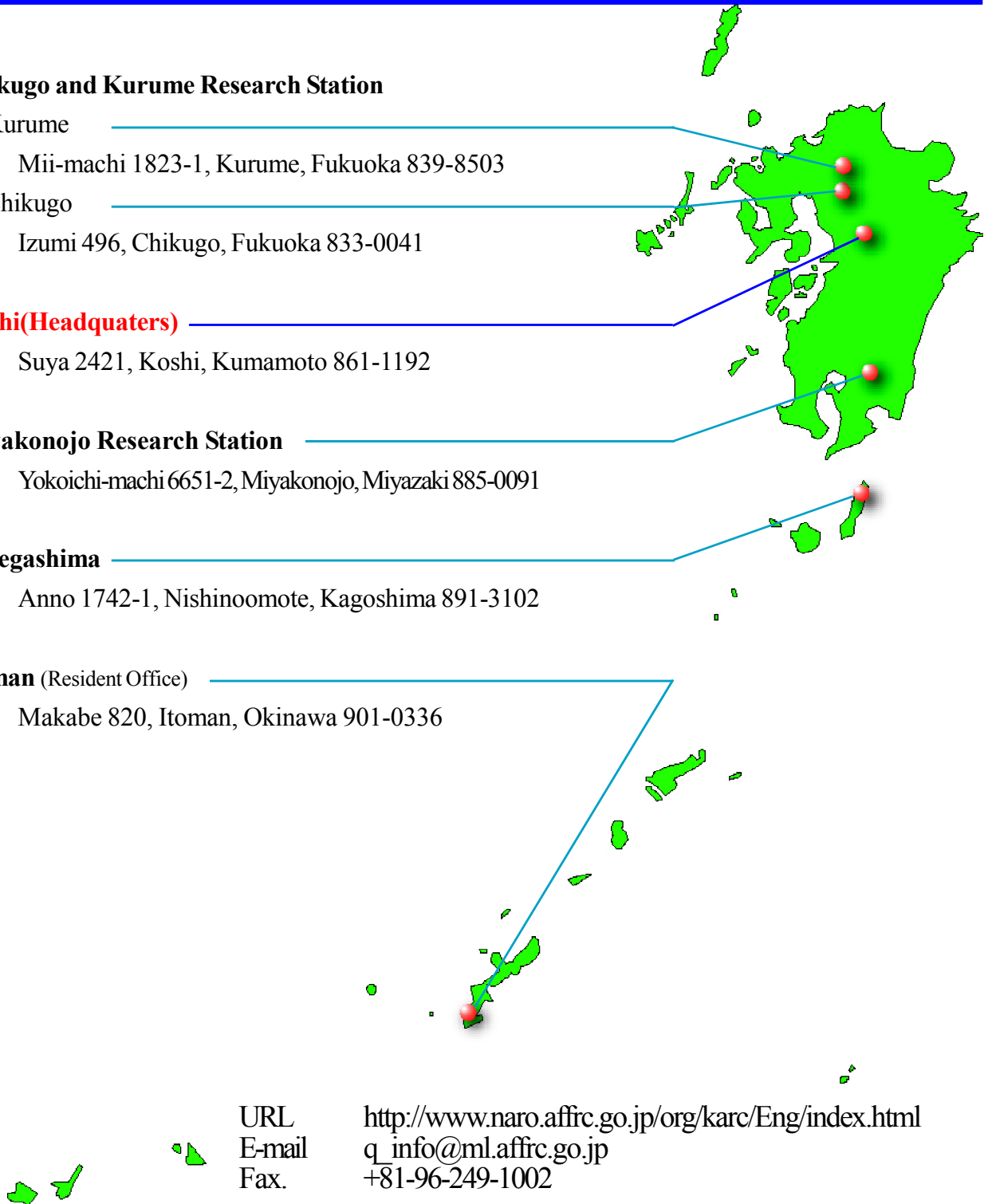
Yokoichi-machi 6651-2, Miyakonojo, Miyazaki 885-0091

## Tanegashima

Anno 1742-1, Nishinoomote, Kagoshima 891-3102

## Itoman (Resident Office)

Makabe 820, Itoman, Okinawa 901-0336



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 +81-96-249-1002

### Premise & Staff

	Premise ha	Staff	(Researcher)
Koshi(Headquaters)	121.3	142	(75)
Chikugo and Kurume Research Station	24.2	65	(39)
(Chikugo)	(13.6)	(42)	(25)
(Kurume)	(10.6)	(23)	(14)
Miyakonojo Research Station	54.4	38	(19)
Tanegashima	14.7	10	(5)
Itoman	—	3	(3)
<b>Total</b>	<b>214.6</b>	<b>258</b>	<b>(141)</b>

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